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Moisture-Resistant Structure Beneath Floor
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Specification /1*

1. Title of the Invention

Moisture-Resistant Structure Beneath Floor

2. Claims

(1) A moisture-resistant structure beneath the floor provided with an unfloored part (6) made up of a lower layer (8) made of an age-hardening material containing an ant repellent and an upper layer (9) made of a age-hardening material containing a hygrostatic agent, wherein the unfloored part (6) is built so that it is on top of earth surface (3) beneath the floor and so that it is continuous between a covering foundation (1) and a bundle of stones (5).

3. Detailed Description of the Invention

(Industrial Field)

The present invention relates to a moisture-resistant structure beneath a floor.

(Prior Art)

In the prior art, a moisture-resistant sheet 16 was placed on the surface of the earth 15 beneath the floor of houses and the like, as indicated in Figure 4 and Figure 5. It was used to prevent moisture beneath the floor and to prevent ants from infiltrating from the earth beneath the floor. A hygrostatic agent 18 (Figure 4) having a specific shape was placed on top of moisture resistant sheet 16 or on

* Numbers in the margin indicate pagination in the foreign text.

raised earth 19 (Figure 5) so as to regulate the moisture in space 20 beneath the floor.

(Problems Which the Present Invention is Intended to Solve) /2

However, when the abovementioned conventional technique was used, it was particularly difficult to build the end part of moisture-prevention sheet 16 and structures for it so that they adhered to one another tightly in structures protruding from earth surface 15, namely, bundle of stones 21 and covering foundation 22. Since there was a gap between moisture-resistant sheet 16 and structures for it in any case, there were problems in that water in the earth 17 beneath the floor from the surrounding structures escaped. Sometimes the hygrostatic action of hygrostatic agent 18 and raised earth 19 was not fully realized and at the same time, ants from the space between moisture-resistant sheet 16 and structures of it infiltrated it.

Taking note of this situation, it is an objective of the present invention to ensure that the prevention of moisture beneath the floor and the repulsion of ants are accomplished quite effectively and to provide a moisture-resistant structure beneath the floor.

(Means Used to Solve the Problems)

The technical means devised in the present invention used to attain the abovementioned objectives is provided with an unfloored part 6 made up of a lower layer 8 made of an age-hardening material containing an ant repellent and an upper layer 9 made of an age- /3

hardening material containing a hygrostatic agent; this unfloored part 6 is located on top of the surface of the earth 3 beneath the floor and is built so that it is continuous between covering foundation 1 and bundle of stones 5.

(Actions)

Unfloored part 6 made up of an age-hardening material exhibits good adhesiveness with covering foundation 1 and bundle of stones 5 and there are virtually no apertures between these after hardening. As a result, virtually no water escapes from earth 4 beneath the floor so that the hygrostatic effect of upper layer 9 of unfloored part 6 can be fully realized. At the same time, virtually no ants can infiltrate from earth 4 beneath the floor around covering foundation 1 in conjunction with the hygrostatic action of lower layer 8 on unfloored part 6.

(Practical Embodiment of Invention)

Next, we shall describe a practical example of the present invention referring to figures.

In Figure 1, 1 is a covering foundation having a reversed T shape when seen in cross section. Vertical wall part 2 on this is embedded in earth 4 beneath the floor so that vertical wall part 2 protrudes from earth surface 3 beneath the floor. 5 is a bundle of stones, a number of which are placed at prescribed intervals on earth surface 3 beneath the floor. The floor stones (not shown in the figure) are set upright on this bundle of stones 5. /4

6 is an unfloored part made of cement, mortar concrete, and other age-hardening material (so-called "unfloored concrete") and is built so that it is on top of the abovementioned earth surface 3 beneath the floor and is continuous between covering foundation 1 and bundle of stones 5. Earth 4 beneath the floor and space 7 beneath the floor are divided by unfloored part 6 which is of a prescribed thickness and the area beneath the floor is made moisture resistant.

In this practical embodiment of the present invention, the abovementioned unfloored part 6 is built so that it has two layers. It is built so that the lower layer 8 consists of an ant repellent and the upper layer 9 contains a hygrostatic agent such as silica gel, activated carbon, and the like.

Therefore, first of all, the abovementioned ant repellent is mixed beforehand into a powdered paste made up of cement and gravel. As indicated in Figure 2, this mixed powdered material 10 is scattered so that it reaches a prescribed thickness on the surface of the earth 3 beneath the floor. Water 11 is scattered onto the top of mixed powdered material 10, it then hardens after a period of time, and lower layer 8 is then formed.

Then, when hardening of lower layer 8 has proceeded to a certain extent, mixed powdered material 12 wherein the abovementioned hygrostatic agent mixed beforehand with a paste made up of cement and gravel is scattered on lower layer 8, as indicated in Figure 3. /5

Likewise water 13 is scattered onto the top of this mixed powdered material 12, it then hardens after a period of time, and upper layer 9 is then formed.

In this practical embodiment of the present invention, upper layer 9 and lower layer 8 on unfloored part 6 used as a hygrostat also have a hygrostatic function and an ant-repellent function. At the same time, unfloored part 6 is made of an age-hardening material made up principally of cement and gravel. Since unfloored part 6 can be packed without any apertures in a structure which protrudes onto the top of earth surface 3 beneath the floor, that is, covering foundation 1 and bundle of stones 5, virtually no water escapes from around these structures and it is virtually impossible for ants to infiltrate. As a result, the moisture-resistant and ant-repellent actions beneath the floor can be accomplished very effectively.

Furthermore, the method used to build unfloored part 6 is not necessarily restricted to scattering the abovementioned mixed powdered materials 10, 12. It may also be built by setting twice mortar concrete containing the hygrostatic agent or the ant repellent by kneading it on site.

(Effect of the Invention)

According to the process of the present invention, lower layer 8 and upper layer 9 on unfloored part 6 built between covering foundation 1 and bundle of stones 5 on top of the earth surface beneath the floor contain respectively an ant repellent and a /6

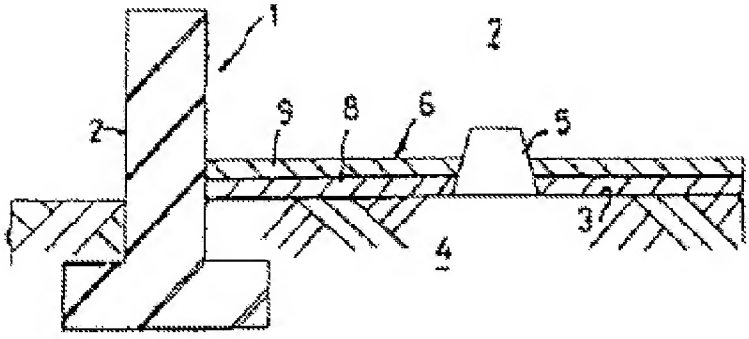
hygrostatic agent and are made up age-hardening materials. At the same time, since there are no apertures between covering foundation 1 and bundle of stones 5 and unfloored part 6, and since both moisture regulation and ant repulsion can be carried out beneath the floor quite effectively, a moisture-resistant structure beneath the surface is provided.

4. Brief Explanation of Figures

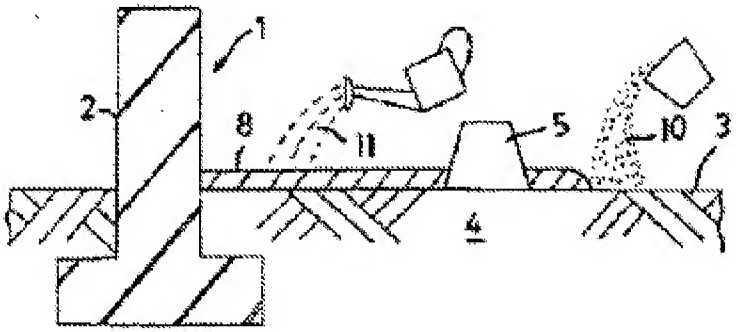
Figure 1 through Figure 3 indicate a practical embodiment of the present invention. Figure 1 is a vertical sectional view of the moisture resistant structure beneath the floor. Figure 2 and Figure 3 are explanatory views of the construction method for same. Figure 4 and Figure 5 are vertical sectional views of the moisture resistant structure beneath the floor in the conventional technique.

1..covering foundation. 3..surface of earth beneath floor. 5..bundle of stones. 6..unfloored part; 8..lower layer. 9..upper layer

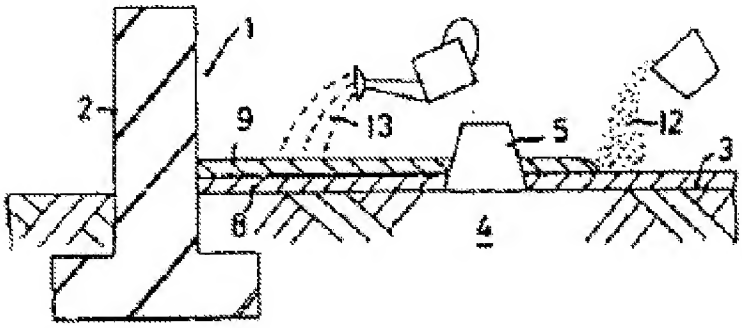
[Figure 1]



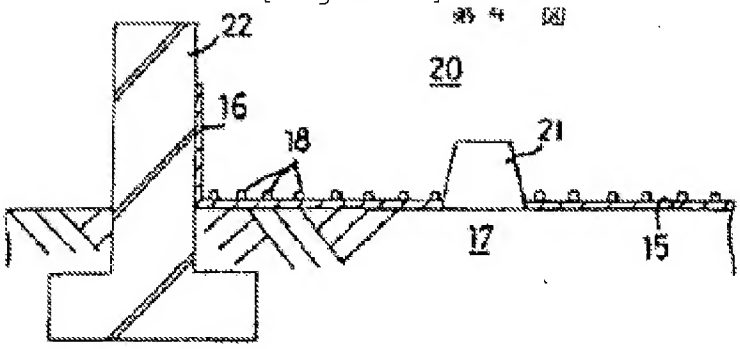
[Figure 2]



[Figure 3]



[Figure 4]



[Figure 5]